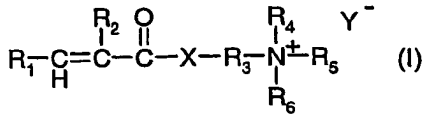
## Claims

1. An aqueous formulation comprising a cationic polymer and wherein the cationic polymer is formed from
   a) a water soluble ethylenically unsaturated monomer or blend of monomers comprising at least one cationic monomer
   b) at least one cross-linking agent in an amount of more than 50 ppm by the weight of component a)
   c) and at least one chain transfer agent.

2. An aqueous formulation according to claim 1 wherein the cationic polymer is added to the formulation while in the form of particles, which have a volume average size of below 10 microns.

3. An aqueous formulation according to claim 1 or 2, wherein component a) comprises 30 to 100 wt-%, based on the total weight of component a), of at least one cationic monomer and 0 – 80 wt-% of at least one monomer, which is non-ionic or anionic.

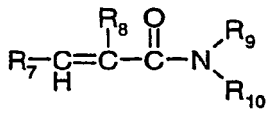
4. An aqueous formulation according to any one of the preceding claims, wherein the cationic monomer(s) of component a) is (are)
   compound(s) according to formula (I)



(I)

   wherein
   $R_1$ is hydrogen or methyl,
   $R_2$ is hydrogen or $C_1$-$C_4$alkyl,
   $R_3$ is $C_1$-$C_4$alkylene,
   $R_4$, $R_5$ and $R_6$ are independently from each other hydrogen or $C_1$-$C_4$alkyl,
   X is –O- or –NH- and
   Y is Cl; Br; I; hydrogensulphate or methosulfate.

5. An aqueous formulation according to any one of the preceding claims, wherein the non-ionic monomer(s) of component a) is (are) N-vinyl pyrrolidone and/or compounds of formula (II)



(II)

wherein

$R_7$ signifies hydrogen or methyl,

$R_8$ signifies hydrogen or $C_1$-$C_4$alkyl, and

$R_9$ and $R_{10}$ signify independently from each other hydrogen or $C_1$-$C_4$alkyl.

6. An aqueous formulation according to any one of the preceding claims, wherein the cross-linking agent(s) of component b) is (are) divinyl benzene; tetra allyl ammonium chloride; allyl acrylates and methacrylates; diacrylates and dimethacrylates of glycols and polyglycols; butadiene; 1,7-octadiene; allyl-acrylamides and allyl-methacrylamides; bisacrylamidoacetic acid; N,N'-methylene-bisacrylamide and polyol polyallylethers, such as polyallylsaccharose and pentaerythritol triallylether.

7. An aqueous formulation according to any one of the preceding claims, wherein the cross-linking agent(s) of component b) is (are) tetra allyl ammonium chloride; allyl-acrylamides and allyl-methacrylamides; bisacrylamidoacetic acid and N,N'-methylene-bisacrylamide.

8. An aqueous formulation according to any one of the preceding claims, wherein the cross-linking agent(s) of component b) is (are) included in the range of 50 – 1200 ppm (based on the component a).

9. An aqueous formulation according to any one of the preceding claims, wherein the cross-linking agent(s) of component b) is (are) included in the range of 500 – 1000 ppm (based on the component a).

10. An aqueous formulation according to any one of the preceding claims, wherein the chain transfer agent(s) c) is (are) selected from mercaptanes; malic acid, lactic acid; formic acid; isopropanol and hypophosphites.

11. An aqueous formulation according to any one of the preceding claims, wherein the chain transfer agent(s) c) is (are) present in a range of from 10 to 50000 ppm (based on the component a).

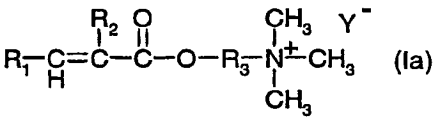
12. An aqueous formulation according to any one of the preceding claims, wherein the chain transfer agent(s) c) is (are) present in a range of from 100 – 10000 ppm (based on the component a).

13. An aqueous formulation according to any one of the preceding claims, wherein the formulation comprises 0.005 to 15 wt-% of the cationic polymer.

14. An aqueous formulation according to any one of the preceding claims, wherein the formulation comprises 0.01 to 10 wt-% of the cationic polymer.

15. An aqueous formulation according to any one of the preceding claims, wherein the formulation contains

a) 0.01 – 5 wt-% of a cationic polymer and wherein the cationic polymer is formed from at least one compound of formula (Ia)



(Ia)

wherein

$R_1$ is hydrogen or methyl,

$R_2$ is hydrogen or methyl,

$R_3$ is $C_1$-$C_2$alkylene and

Y is Cl; Br or I, and

b) at least one cross-linking agent selected from divinyl benzene; tetra allyl ammonium chloride; allyl acrylates and methacrylates; diacrylates and dimethacrylates of glycols and polyglycols; butadiene; 1,7-octadiene; allyl-acrylamides and allyl-methacrylamides; bisacrylamidoacetic acid; N,N'-methylene-bisacrylamide and polyol polyallylethers in an amount of 50 – 1200 ppm (based on the component a), and

c) at least one chain transfer agent selected from mercaptanes; malic acid; lactic acid; formic acid; isopropanol and hypophosphites in an amount an amount of 1000 – 9000 ppm (based on the component a).

16. An aqueous formulation according to claim 15, wherein at least one cross-linking agent is included in an amount of 500 – 1000 ppm (based on the component a).

17. An aqueous formulation according to claim 15, wherein at least one cross-linking agent is included in an amount of 700 – 900 ppm (based on the component a).

18. An aqueous formulation according to claim 15, wherein at least one chain transfer agent is present in an amount of 2000 – 5000 ppm (based on the component a).

19. An aqueous formulation according to anyone of the preceding claims for the use as household composition such as general-purpose cleaners for cleaning hard surfaces, acid household cleaners (bath), WC cleaners or laundry care products.

20. A fabric softener composition comprising

A) 0.5 to 50 wt-%, based on the total weight of the composition, of cationic quaternary ammonium salts; tertiary fatty amines having at least one $C_8$-$C_{30}$alkyl chains, carboxylic acids having 8 to 30 carbons atoms and one carboxylic group per molecule; esters of polyhydric alcohols; fatty alcohols; ethoxylated fatty alcohols; alkyphenols; ethoxylated alkyphenols; ethoxylated fatty amines; ethoxylated monoglycerides; ethoxylated diglycerides; mineral oils and/or polyols;

B) 0.005 to 15 wt-%, based on the total weight of the composition, of the cationic polymer according to claim 1 - 18;

C) 0 to 20 wt-%, based on the total weight of the composition, of customary additives; and

D) water to 100 %.

21. A fabric softener composition according to Claim 20 comprising

A) 0.5 to 50 wt-%, based on the total weight of the composition, of the fabric softener;

B) 0.005 to 15 wt-%, based on the total weight of the composition, of the cationic polymer;

C) 0 to 20 % wt-%, based on the total weight of the composition, of customary additives; and

D) 0 to 5% wt-%, based in the total weight of the composition, of a perfume

E) water to 100 %.

22. A fabric softener composition according to Claim 20 comprising

A) 0.5 to 50 wt-%, based on the total weight of the composition, of the fabric softener;

B) 0.005 to 15 wt-%, based on the total weight of the composition, of the cationic polymer;

C) 0 to 20 wt-%, based on the total weight of the composition, of customary additives;

D) 0 to 5 wt-%, based in the total weight of the composition, of a perfume;

E) 0 to 0.5 wt-%, based in the total weight of the composition, a component capable of sequestering metal ions and selected from the group consisting of:

i) chelating components selected from the group consisting of amino carboxylic acid, organo aminophosphonic acid components, and mixtures thereof,

ii) polycarboxylic building components, other than those defined under i) as chelating components, comprising at least two carboxylic radicals separated from each other by not more than two carbon atoms, and,

iii) mixtures thereof, and

F) water to 100 %.

23. A fabric softener composition according to Claim 20, wherein the customary additives are alcohols; polyhydric alcohols; amphoteric and nonionic surfactants; oxyethylated fatty alcohols; hydrogenated and ethoxylated castor oil; alkyl polyglycosides; fatty alcohols; fatty acid esters; fatty acids; ethoxylated fatty acid glycerides; or fatty acid partial glycerides; inorganic or organic salts; non-aqueous solvents; pH buffers; perfumes; dyes; hydrotropic agents; antifoams; anti redeposition agents; enzymes; optical brighteners; antishrink agents; stain removers; germicides; fungicides; antioxidants; corrosion inhibitors; dye fixing agents; dye transfer inhibitors; wrinkle recovery agents and/or wet soiling reduction agent.

24. A cationic polymer formed from

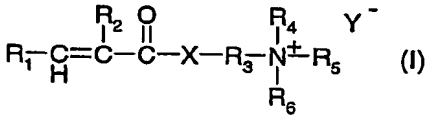
a) a water soluble ethylenically unsaturated monomer or blend of monomers comprising at least one cationic monomer

b) at least one cross-linking agent in an amount of more than 600 ppm by the weight of component a).

c) and optionally at least one chain transfer agent.

25. A cationic polymer according to Claim 24, wherein the component a) comprises 30 to 100 wt-% of one cationic monomer and 0 – 80 wt-% of a monomer, which is non-ionic or anionic.

26. A cationic polymer according to Claim 24 or 25, wherein the cationic monomer(s) of component a) is (are) compound(s) according to formula (I)



(I)

wherein

$R_1$ is hydrogen or methyl,

$R_2$ is hydrogen or $C_1$-$C_4$alkyl,

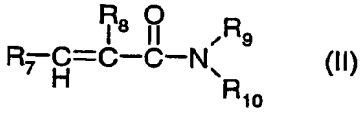
$R_3$ is $C_1$-$C_4$alkylene,

$R_4$, $R_5$ and $R_6$ are independently from each other hydrogen or $C_1$-$C_4$alkyl,

X is –O- or –NH- and

Y is Cl; Br; I; hydrogensulphate or methosulfate.

27. A cationic polymer according to any one of claims 24 - 26, wherein the non-ionic monomer(s) of component a) is (are) N-vinyl pyrrolidone and/or compounds of formula (II)



(II)

wherein

$R_7$ signifies hydrogen or methyl,

$R_8$ signifies hydrogen or $C_1$-$C_4$alkyl, and

$R_9$ and $R_{10}$ signify independently from each other hydrogen or $C_1$-$C_4$alkyl.

28. A cationic polymer according to any one of claims 24 - 27, wherein the cross-linking agent(s) of component b) is (are) divinyl benzene; tetra allyl ammonium chloride; allyl acrylates and methacrylates; diacrylates and dimethacrylates of glycols and polyglycols; butadiene; 1,7-octadiene; allyl-acrylamides and allyl-methacrylamides; bisacrylamidoacetic acid; N,N'-methylene-bisacrylamide and polyol polyallylethers, such as polyallylsaccharose and pentaerythritol triallylether.

29. A cationic polymer according to any one of claims 24 - 28, wherein the cross-linking agent(s) of component b) is (are) tetra allyl ammonium chloride; allyl-acrylamides and allyl-methacrylamides; bisacrylamidoacetic acid and N,N'-methylene-bisacrylamide.

30. A cationic polymer according to any one of claims 24 - 29, wherein the cross-linking agent(s) of component b) is (are) included in the range of 650 – 1200 ppm (based on the component a).

31. A cationic polymer according to any one of claims 24 - 29, wherein the cross-linking agent(s) of component b) is (are) included in the range of 700 – 1000 ppm (based on the component a).

32. A cationic polymer according to any one of claims 24 - 29, wherein the cross-linking agent(s) of component b) is (are) included in the range of 700 – 900 ppm (based on the component a).

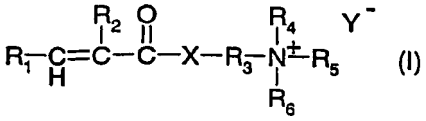
33. A cationic polymer according to any one of claims 24 - 32, wherein the chain transfer agent(s) c) is (are) selected from mercaptanes; malic acid; lactic acid, formic acid; isopropanol and hypophosphites.

34. A cationic polymer according to any one of claims 24 - 33, wherein the chain transfer agent(s) c) is (are) present in a range of from 10 to 50000 ppm (based on the component a).

35. A cationic polymer according to any one of claims 24 - 34, wherein the chain transfer agent(s) c) is (are) present in a range of from 100 – 10000 ppm (based on the component a).

36. A cationic polymer according to any one of claims 24 - 35, formed from

a) 30 to 100 wt-% of at least one compound according to formula (I)



(I)

wherein

$R_1$ is hydrogen or methyl,

$R_2$ is hydrogen or $C_1$-$C_4$alkyl,

$R_3$ is $C_1$-$C_4$alkylene,

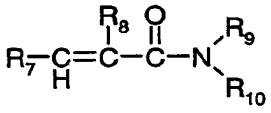
$R_4$, $R_5$ and $R_6$ are independently from each other hydrogen or $C_1$-$C_4$alkyl,

X is –O- or –NH- and

Y is Cl; Br; I; hydrogensulphate or methosulfate, and

0 – 80 wt-% of N-vinyl pyrrolidone and/or

at least one compound of formula (II)



(II)

wherein

$R_7$ signifies hydrogen or methyl,

$R_8$ signifies hydrogen or $C_1$-$C_4$alkyl, and

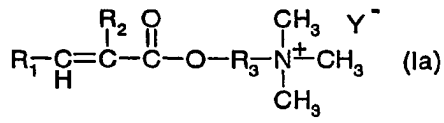
$R_9$ and $R_{10}$ signify independently from each other hydrogen or $C_1$-$C_4$alkyl,

b) at least one cross-linking agent in an amount of 700 – 900 ppm (based on the component a) selected from the group consisting of divinyl benzene; tetra allyl ammonium chloride; allyl acrylates and methacrylates; diacrylates and dimethacrylates of glycols and polyglycols; butadiene; 1,7-octadiene; allyl-acrylamides and allyl-methacrylamides; bisacrylamidoacetic acid; N,N'-methylene-bisacrylamide and polyol polyallylethers, such as polyallylsaccharose and pentaerythritol triallylether and

c) from 0 to 50000 ppm (based on the component a), more preferably 100 – 10000 ppm (based on the component a) of at least one chain transfer agent selected from the group consisting of mercaptanes; malic acid; lactic acid; formic acid; isopropanol and hypophosphites.

**37.** A cationic polymer according to any one of claims 24 - 36, formed from

a) 30 to 100 wt-% of at least one compound according to formula (Ia)



(Ia)

wherein

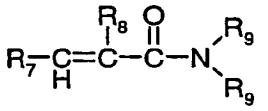
$R_1$ is hydrogen or methyl,

$R_2$ is hydrogen or methyl,

$R_3$ is $C_1$-$C_2$alkylene and

Y is Cl; Br or I, and

0 – 80 wt-% of at least one compound of formula (IIa)



(IIa)

wherein

$R_7$ signifies hydrogen or methyl,

$R_8$ signifies hydrogen or methyl, and

$R_9$ signifies hydrogen; methyl; ethyl or propyl,

b) 700 – 900 ppm (based on the component a) of at least one cross-linking agent selected from the group consisting of divinyl benzene; tetra allyl ammonium chloride; allyl acrylates and methacrylates; diacrylates and dimethacrylates of glycols and polyglycols; butadiene; 1,7-octadiene; allyl-acrylamides and allyl-methacrylamides; bisacrylamidoacetic acid; N,N'-methylene-bisacrylamide and polyol polyallylethers, such as polyallylsaccharose and pentaerythritol triallylether, and

c) from 0 to 50000 ppm (based on the component a), more preferably 100 – 10000 ppm (based on the component a) of at least one chain transfer agent selected from the group consisting of mercaptanes; malic acid; lactic acid; formic acid; isopropanol and hypophosphites.